

LISTING OF CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A layer system, comprising: having  
  
at least one functional layer formed from ~~a metal oxide,~~  
~~wherein at least one functional layer formed from a metal oxide~~  
~~comprises~~ titanium aluminum oxide,  
  
wherein the layer system has a high thermal stability at  
operating temperatures of more than 600°C.
2. (Currently amended) The layer system as claimed in claim 1, wherein the at least one functional layer ~~comprising~~  
~~titanium aluminum oxide has~~ is interrupted by at least one intermediate layer ~~which interrupts it and is~~ formed from a different metal oxide ~~that is different than the~~ at least one functional layer, and wherein the at least one intermediate layer ~~being~~ is optically inactive.
3. (Currently amended) The layer system as claimed in claim 2, wherein the at least one intermediate layer has a thickness so that ~~remains below a thickness at which it~~ the at least one intermediate layer ~~can become~~ is rendered optically inactive.
4. (Currently amended) The layer system as claimed in claim 3, wherein the ~~layer thickness  $d_z$  of the~~ at least one intermediate layers is from 0.3nm to 10 nm, ~~preferably 0.5 to 4 nm, particularly preferably 1.0 to 2.5 nm.~~

5. (Currently amended) The layer system as claimed in claim 3-~~or 4~~, wherein the at least one intermediate layer comprises silicon oxide.

6. (Currently amended) The layer system as claimed in claim 2, wherein the at least one intermediate layer has ~~the a~~ same refractive index ~~as equal to a refractive index of the at~~ least one functional layer ~~comprising titanium aluminum oxide,~~ so that the at least one intermediate layer ~~can be~~ is rendered optically inactive.

7. (Currently amended) The layer system as claimed in claim 6, wherein the at least one intermediate layer comprises zirconium oxide.

8. (Currently amended) A layer system, comprising: having  
~~at least one functional layer formed from a metal oxide,~~  
~~wherein~~ at least one intermediate layer comprising titanium aluminum oxide, the at least one intermediate layer interrupting ~~at least one functional layer formed from a~~ different metal oxide ~~that is different than the at least one~~ intermediate layer, and the at least one intermediate layer being optically inactive,

wherein the layer system has a high thermal stability at operating temperatures of more than 600°C.

9. (Currently amended) The layer system as claimed in claim 8, wherein the at least one intermediate layer has a thickness so that ~~comprising titanium aluminum oxide remains below a thickness at which the~~ at least one intermediate layer ~~it can become~~ is rendered optically inactive.

10. (Currently amended) The layer system as claimed in claim 9, wherein the ~~layer thickness  $d_z$  of the~~ at least one intermediate layer ~~s is from 0.3 nm to 10 nm, preferably 0.5 to 4 nm, particularly preferably 1.0 to 2.5 nm.~~

11. (Currently amended) The layer system as claimed in claim 9 ~~or 10~~, wherein the at least one functional layer comprises silicon oxide.

12. (Currently amended) The layer system as claimed in claim 8, wherein the at least one functional layer has the same refractive index as equal to a refractive index of the at least one intermediate layer ~~comprising titanium aluminum oxide~~, so that the at least one intermediate layer ~~can be~~ is rendered optically inactive.

13. (Currently amended) The layer system as claimed in claim 12, wherein the at least one functional layer comprises zirconium oxide.

14. (Currently amended) The layer system as claimed in ~~one of claims 1 to 13~~, wherein the at least one functional layer ~~comprising a titanium aluminum oxide consists~~ comprises ~~of  $Ti_xAl_{1-x}O_y$ , and wherein  $0 < x$  is greater than 0 but less than  $< 1$ .~~

15. (Currently amended) The layer system as claimed in claim 14, wherein ~~the refractive index n of the~~ at least one functional layer comprising titanium aluminum oxide ~~has a refractive index that can be set at~~ in a range of 1.55 ~~= n =~~ to 2.50 by ~~means of the~~ a quantitative ratio of titanium to aluminum.

16. (Currently amended) The layer system as claimed in ~~one of the preceding claims~~ 1, wherein the at least one functional layer system ~~comprises a plurality of functional layers,~~ preferably an alternating layer system composed of functional layers of metal oxides with high and low refractive indices.

17. (Currently amended) The layer system as claimed in claim ~~28~~16, wherein the plurality of functional layers of high refractive index ~~comprise~~ comprise titanium aluminum oxide.

18. (Currently amended) The layer system as claimed in claim 17, wherein the plurality of functional layers of low refractive index ~~comprise~~ comprise silicon oxide.

19. (Currently amended) The layer system as claimed in claim 18, wherein the plurality of functional layers of ~~a~~ high refractive index ~~comprising titanium aluminum oxide~~ are interrupted by a plurality of intermediate layers of low refractive index comprising silicon oxide ~~and/or functional layers of low refractive index comprising silicon oxide~~ are interrupted by intermediate layers of high refractive index comprising titanium aluminum oxide.

20. (Currently amended) The layer system as claimed in ~~one~~  
~~of claims 1 to 19~~, wherein the at least one functional layers  
~~are~~is produced by ~~means of~~ chemical vapor deposition processes,  
~~preferably plasma enhanced, in particular by means of pulsed~~  
~~plasma enhanced CVD processes.~~

21. (Currently amended) The layer system as claimed in ~~one~~  
~~of claims 1 to 19~~, wherein the at least one functional layers  
~~are~~is produced by ~~means of PVD~~physical vapor deposition  
processes.

22. (Currently amended) The layer system as claimed in ~~one~~  
~~of claims 1 to 19~~, wherein the at least one functional layers  
~~are~~is produced by ~~means of sol-gel~~ processes.

23. (Currently amended) The layer system as claimed in  
claim 1, wherein the layer system is usable as a coating for Aa  
~~illumination body which has a coating comprising the layer~~  
~~system as claimed in one of claims 1 to 22.~~

24. (Currently amended) The layer system as claimed in  
claim 23, wherein ~~T~~the illumination body as claimed in claim 23,  
~~which~~ is an IRC lamp or an IRC torch.

25. (Currently amended) The layer system as claimed in  
claim 1, wherein the layer system is usable as a coating for Aa  
~~reflector which has a coating comprising the layer system as~~  
~~claimed in one of claims 1 to 22.~~

26. (Currently amended) The layer system as claimed in  
claim 25, wherein ~~T~~the reflector as claimed in claim 25, which  
is a glass-ceramic reflector.

27. (New) The layer system as claimed in claim 8, wherein the at least one intermediate layer comprises  $Ti_xAl_{1-x}O_y$ , and wherein the x is greater than 0 but less than 1.

28. (New) The layer system as claimed in claim 1, wherein the layer system comprises an alternating layer system comprising a plurality of functional layers of high refractive index and a plurality of functional layers of low refractive index.

29. (New) The layer system as claimed in claim 18, wherein the plurality of functional layers of low refractive index are interrupted by a plurality of intermediate layers of high refractive index comprising titanium aluminum oxide.